SPECIFICATION AMENDMENT

Paragraph from Page 1, lines 6 to 16 is revised and replace as follows:

The present invention relates to a flat board type brushless DC (BLDC) motor which has more than one [[plate]] unit structure of the stator and rotor [[structure]]. More particularly, the stator [[structure]] consists of the [[slotted lamination]] stator core and laminated stator teeth core. The rotor [[structure]] consists of a [[magnetic plate core installed with]] circular flat rotor frame to install a set of permanent magnets or a laminated rotor core with an annular disk-shaped short circuit made of a die-casting aluminum or copper [[of a short circuit configuration]]. [[The stator and rotor are faced each other.]] The multiple stage BLDC motor is basically configured a housing frame with a pair of end stators, a dual stator dual rotor, a common shaft, a rotating frame with a dual rotor and a set of bearings in the housing frame. The multi flat board type BLDC motor [[forms]] installs more than one [[structure of the stators and rotors]] dual stator and dual rotor for increasing the motor output power. [[The flat board type BLDC motor of the present invention is able to increase the output power by using wider diameter against axial length per unit volume.]] [[So, it is possible to vary the capacity of output power by adopting the multiple stators and rotors to produce the higher power.]]

Paragraphs from Page 4, lines 14 to Page 6, lines 7 are revised and replace as follows:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[[Due to the drawing, this invention can be carried out as followings. The flat type

motor of this invention has the structure assembled the flat stator (1), the flat rotor (2) and the housing (6) shown Fig. 4 through Fig. 8. The above housing (6) is made to support the shaft axis of rotor which is installed to rotate the rotor (2) against the stator (1) assembled the multi laminated stator core (Fig.4a) and the teeth core (Fig.4b). The above stator (1) is installed in the side of the housing (6) and made of the laminated stator core (3) and the laminated teeth core (4).]]

Hereinafter, a multiple stage of flat board type brushless Direct Current (BLDC) motor of the present invention will be described in detail with reference to the accompanying drawings.

As shown in Figs 4 to 10, the multiple stage BLDC motor comprises that: a pair of end stators is consisted of an annular disk-shaped stator core (3) and a plurality of teeth cores (4) having winding coils installed on one side of the annular disk-shaped stator core (3) at constant intervals. A dual stator is consisted of the annular disk-shaped stator core (3) and the plurality of teeth cores (4) having winding coils installed on both sides of the annular disk-shaped stator core (3) at constant intervals. A dual rotor is consisted of an annular disk-shaped rotor actuator (14) installed the multiple rotor teeth (13), an annular disk-shaped short circuit (11) attached to the annular disk-shaped rotor actuator (14). The annular disk-shaped rotor actuator (14) and the annular disk-shaped short circuit (11) are attached to both side of a circular disk-shaped rotor frame (5) for facing to the neighbored teeth cores (3). The dual rotor is mounted on a common shaft (8) with a set of bearings (9). A common housing envelops the pair of end stators, the dual stator and the dual rotor mounted on the common shaft.

[[The stator core (3) has the laminated flat core structure of a ring type which is slotted a constant distance slot for the install of the teeth core (4) and the winding of the exciting coil (10) on the circumference of a stator core circle.

The stator slot (3b) of the above stator core (3) has the structure configure which is made of the multi slot with a constant distance on the inner or outer circumference of a stat core circle in order to install the teeth core (4).]]

As shown in Fig. 4a, the annular disk-shaped stator cores (3) comprises the multiple of paired slots (3b) with a center fixture (3a) at constant intervals along with a circumference of the annular disk-shaped stator cores (3) that are opened either inward or outward along with the circumferences of the stator cores (3).

[[The above teeth core (4) has a constant thickness which is consisted of a number of teeth core. Similarly, the above stator core (3) has a constant thickness which is consist of a number of stator cores.]]

As shown in Fig. 4b, the teeth core (4) comprises the multiple of flat lamination layers forming a constant thickness. The teeth cores (4) are inserted into the paired slots (3b) with the center fixture (3a) through the inner opening opened to inner circumference of the stator cores (3) or the outer opening opened to outer circumference of the stator cores (3).

[[The rotor (2) against the above stator (1) is consisted of the rotor shaft (8) and the circle flat rotor frame (5) fixed on the motor shaft and is assembled the permanent magnet (7) of the N and S-pole on the circle flat rotor for the regular magnetic pole. The above rotor shaft (8) is connected to the bearing fixed at the motor housing frame (6). The permanent magnet (7) has the even magnetic pole array of N and S pole according to the magnetic pole number of motor.]]

As shown in Fig. 5, a plurality of the teeth cores (4) comprising the multiple of flat lamination layers forming a constant thickness are inserted into the paired slots (3b) with the center fixture (3a) through the inner opening opened to inner circumference of the stator cores (3) or the outer opening opened to outer circumference of the stator cores (3).

As shown in Fig. 6, an end stator is shown that a plurality of teeth cores (4) with

winding coils is installed to one side of the annular disk-shaped stator core (3) at constant intervals in the housing (6).

As shown in Figs. 7a and 7b, the rotor (2) is comprised of a circular flat rotor frame (5) for attaching the permanent magnets (7). A rotor shaft (8) is integrally fixed to the circular flat rotor frame (5). The permanent magnets (7) are arranged to be evenly faced against the teeth core (4) with the winding coils (10). The total number of N-S magnetic poles attached to the circular flat rotor frame (5) is arranged to be even number.

[[As shown Fig 8a, 8b and 8c, in order to increase the torque of motor, the number of stator frame (5) which is consisted of the stator core (3) and the teeth core (4) and the number of the rotor frame (5) which is made of the permanent magnet for a permanent magnet brushless motor and synchronous motor or the short circuit flat type (Fig.9a) for the flat type induction motor must be added.]]

As shown in Figs. 8a, 8b and 8c, an end stator comprises an annular disk-shaped stator core (3) and a plurality of teeth cores (4) with winding coils installed on one side of the annular disk-shaped stator core (3) at constant intervals. A dual stator comprises the plurality of teeth cores (4) with winding coils installed on both sides of the annular disk-shaped stator core (3) at constant intervals. A dual rotor comprises the permanent magnets (7) installed on a circular flat rotor frame (5). The rotor shaft (8) is mounted to the bearings (9) in the housing frame (6). The number of dual stator and dual rotor installed in the housing frame (6) can be increased for increasing the motor torque output.

[[As shown Fig. 9a and Fig.9b, the rotor of this invention is consisted of the rotor core and teeth core such as the stator core (3) and the teeth core (4) for the flat type induction motor against the conventional induction motor. To flow the induced current on the flat type rotor, the rotor (14) has the short circuit conductor (11) with the aluminum die-casting conductor or the copper.]]

As shown in Figs. 9a, 9b and 9c, the rotor actuator (14) comprises an annular disk-shaped rotor core (13a) forming with the multiple of flat lamination layers with a constant thickness, a rotor teeth core (13) forming the multiple of flat lamination layers with winding coils, an annular disk-shaped short circuit (11) having the multiple of rectangular-shaped cutout slots at the constant intervals for partially exposing and insulating between the rotor teeth cores (13). The annular disk-shaped short circuit (11) is made of aluminum die-casting or copper.

[[As above the expressions, the flat type motor of this invention has the structure which the diameter of motor is larger than the axial length of motor. And the flat type motor has the laminated magnetic stator core as the drawing of 4a and 4b and the laminated teeth core as the drawing of 5 for the magnetic circuit path from the exciting winding current and the flat type permanent magnet rotor.]]

[[Also, the winding of the above teeth core, as shown the drawing of 5, is located and fixed at the span of the teeth core and the teeth core. The stator core (3) coupled with the teeth core (4) is fixed at the housing frame as shown the drawing of 6.]]

As shown in Figs. 10a and 10b, a dual rotor comprises the annular disk-shaped rotor actuator (14) having the multiple rotor teeth (13) and the annular disk-shaped short circuit (11). The annular disk-shaped rotor actuator (14) and the annular disk-shaped short circuit (11) are attached to both side of a circular disk-shaped rotor frame (5) faced to the neighbored stator teeth cores (3). The number of dual stator and dual rotor installed in the housing frame (6) can be increased for increasing the motor output torque.